



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,785	03/21/2006	Jochen Wehner	WEHNER-2 PCT	9559
7055 7590 07/21/2011 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER				
MCULLLEY, MEGAN CASSANDRA				
ART UNIT		PAPER NUMBER		
1767				
NOTIFICATION DATE		DELIVERY MODE		
07/21/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary

Application No.

10/572,785

Applicant(s)

WEHNER, JOCHEN

Examiner

MEGAN MCCULLEY

Art Unit

1767

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2011.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-41 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 20-41 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/28/2011.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 20-22 and 26-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singh et al. (U.S. Pat. 5,077,371) in view of Althaus et al. (U.S. Pat. 4,950,792) in further view of Sondhe et al. (U.S. Pat. 5,340,652).

Regarding claim 20, 33, 34, 36, and 38: Singh et al. teaches a process for production comprising mixing one or more low molecular weight polyols having a molecular weight of less than 250 (col. 2 lines 20-28) and being a polyether polyol with two hydroxyl groups (col. 3 lines 17-29). Therefore, the concentration of hydroxyl groups per kilogram is between 8 (MW=250) and 22 (MW=90, lowest molecular weight of the preferred polyol, butanediol). Also disclosed is a high molecular weight polyol having a molecular weight of 650-3000 with a functionality of 2 (col. 2 lines 50-66). Therefore, the concentration of hydroxyl groups per kilogram is between 0.66 (MW=3000) and 3 (MW=650). Also mixed are an aromatic amine (col. 1 lines 29-33) and a polyisocyanate (col. 2 lines 24-28).

Singh et al. does not disclose the polyol component premixed before the mixing of the polyol component and the polyisocyanate component. However, Althaus et al. teaches mixing the polyol and amine before processing with the isocyanate (col. 4 lines 11-18). Singh et al. and Althaus et al. are analogous art since they are both concerned with the same field of endeavor, namely polyurethane production. At the time of the

invention a person having ordinary skill in the art would have found it obvious to combine the processing steps disclosed in Althaus et al. with the composition disclosed in Singh et al. and would have been motivated to do so since it is a process commonly used in polyurethane production and requires fewer reaction sequence steps than prepolymer formation (col. 4 lines 11-28).

Singh et al. also does not disclose a light resistant aromatic amine. However, Althaus et al. teaches the light resistant aromatic amine 4,4'-methylene-bis(3-chloro-2,6-diethylaniline) (col. 2 lines 53-55). At the time of the invention a person having ordinary skill in the art would have found it obvious to substitute the amine disclosed in Althaus et al. for the amine of Singh et al. and would have been motivated to do so since it is very temperature stable, as evidenced by Althaus et al. (col. 2 lines 20-25).

Singh et al. also does not disclose bringing the mixture into contact with a synthetic resin not cured or not completely cured. However, Sondhe et al. teaches mixing (col. 13 line 31) a composition comprising an aromatic amine (col. 3 line 3), and a polyol component and a polyisocyanate component (abstract). Sondhe et al. also teaches that upon mixing, the urethane system will immediately commence reaction (col. 13 lines 33-35); therefore it is at least partially cured. Also disclosed is application to an epoxy, which is not fully cured (col. 3 lines 59-62). Sondhe et al. and Singh et al. are analogous art because they are both concerned with the same field of endeavor, namely polyurethane compositions. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the composition of Singh et al. with the process of Sondhe et al. and would have been motivated to do so for

such desirable properties as lower residual free aromatic polyisocyanates, as evidenced by Singh et al. (col. 1 lines 5-10).

The process of the above combination would implicitly yield a synthetic resin composite material.

Regarding claim 21: While Singh et al. does not directly teach that the gel coat at 23°C displays an elongation at break (measured as per DIN EN ISO 527) of at least 3%, since all of the components are present in the composition in the claimed amounts and a substantially similar process, it is implicit that the composition would have these properties. According to the instant specification, the claimed process results in this feature (publication para. 36). If it is applicants' position that this would not be the case: (1) evidence would need to be presented to support applicants' position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain a composition with these properties.

Regarding claim 22: Singh et al. does not teach the polyurethane gel coat is not completely cured. However, at the time of the invention a person having ordinary skill in the art would have found it obvious to not completely cure the polyurethane gel coat based on the teaching of Sondhe et al. and would have been motivated to do so since this would allow the urethane to bleed and intermingle with the epoxy in order to form chemically fused layers, as evidenced by Sondhe et al. (col. 3 lines 57-68).

Regarding claims 26, 27, 28, and 29: Althaus et al. teaches 4,4'-methylenebis(3-chloro-2,6-diethylaniline) (col. 2 lines 53-55), which is a 4,4'-methylenebis (2,6-dialkyl-aniline). As evidenced by paragraphs 60-63 of the Pre-Grant Publication of the

instant application, this particular aromatic amine when subjected to the limitations found in claims 26 and 27 of the instant application implicitly gives the desired gel time and color shade change. If it is applicants' position that this would not be the case: (1) evidence would need to be presented to support applicants' position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain a composition with these properties.

Regarding claim 30: Singh et al. teaches the basic composition as set forth above. Not disclosed is the amount of the amine. However, Althaus et al. teaches 19.5 parts amine per 100 parts polyol (Table 3 Amine No. V). At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the amount of amine of Althaus et al. with the composition of Singh et al. and would have been motivated to do so to achieve the desired pot life.

Regarding claims 31, 32, and 37: Singh et al. teaches 0-8% of the low molecular weight polyol in the polyol component (col. 3 lines 17-29). Therefore, there is 100-92% of the high molecular weight component.

Regarding claim 35: Singh et al. teaches the high molecular weight polyol is a polyether polyol (col. 2 lines 50-66).

Claim 23 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Singh et al. (U.S. Pat. 5,077,371) in view of Althaus et al. (U.S. Pat. 4,950,792) in view of Sondhe et al. (U.S. Pat. 5,340,652) as applied to claim 22 and in further view of McGaughey et al. (U.S. Pat. 3,646,651).

Regarding claim 23: Singh et al. does not disclose that the resin is applied onto the gel coat material. However, McGaughey et al. teaches applying a composite material of a polyurethane (col. 2 lines 55-63) covered with an epoxy resin (col. 3 lines 1-20 and col. 2 lines 15-40). Singh et al. and McGaughey et al. are analogous art since they are both concerned with the same field of endeavor, namely polyurethane products. At the time of the invention a person having ordinary skill in the art would have found it obvious to use the polyurethane of Singh et al. in the product of McGaughey et al. and would have been motivated to do so to achieve composite chemical processing equipment able to withstand corrosive environments as evidenced by McGaughey et al. (col. 1 lines 1-20).

Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singh et al. (U.S. Pat. 5,077,371) in view of Althaus et al. (U.S. Pat. 4,950,792) in further view of Sondhe et al. (U.S. Pat. 5,340,652) as applied to claim 20 and in further view of Motsinger et al. (U.S. Pat. 3,217,536).

Regarding claims 24 and 25: Singh et al. teaches the basic process as set forth above. Not disclosed is the synthetic resin contains reinforcing materials. However, Motsinger et al. teaches a polyurethane coating on an epoxy resin laminated with fiberglass (col. 3 line 66-col. 4 line 1). Singh et al. and Motsinger et al. are analogous art because they are both concerned with the same field of endeavor, namely polyurethanes. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the fiberglass laminated epoxy of Motsinger et

al. with the composition of Singh et al. and would have been motivated to do so for such desirable properties as to provide strength and weather protection, as evidenced by Motsinger et al. (col. 4 lines 1-14).

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singh et al. (U.S. Pat. 5,077,371) in view of Althaus et al. (U.S. Pat. 4,950,792) in further view of Sondhe et al. (U.S. Pat. 5,340,652) as applied to claim 38 and in further view of Chapin (U.S. Pat. 4,089,215).

Regarding claim 39: Singh et al. teaches the basic material as set forth above. Not disclosed is that it is part of a rotor vane. However, Chapin teaches a similar material on a rotor vane (abstract, col. 5 lines 45-55). The use of the rotor vane in a wind power plant is intended use and carries little patentable weight (see MPEP 2111.02 II). Singh et al. and Chapin are analogous art since they are both concerned with the same field of endeavor, namely polyurethane products. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the use of Chapin with the composition of Singh et al. and would have been motivated to do so since a rotor vane needs to have low inertia to provide a prompt and accurate response to changes in rate of air flow, as evidenced by Chapin (col. 5 lines 45-55).

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singh et al. (U.S. Pat. 5,077,371) in view of Althaus et al. (U.S. Pat. 4,950,792) in further view of Sondhe et al. (U.S. Pat. 5,340,652).

Regarding claim 40: Singh et al. teaches a process for production comprising mixing one or more low molecular weight polyols having a molecular weight of less than 250 (col. 2 lines 20-28) and being a polyether polyol with two hydroxyl groups (col. 3 lines 17-29). Therefore, the concentration of hydroxyl groups per kilogram is between 8 (MW=250) and 22 (MW=90, lowest molecular weight of the preferred polyol, butanediol). Also disclosed is a high molecular weight polyol having a molecular weight of 650-3000 with a functionality of 2 (col. 2 lines 50-66). Therefore, the concentration of hydroxyl groups per kilogram is between 0.66 (MW=3000) and 3 (MW=650). Singh et al. teaches 0-8% of the low molecular weight polyol in the polyol component (col. 3 lines 17-29). Therefore, there is 100-92% of the high molecular weight component. Also mixed are an aromatic amine (col. 1 lines 29-33) and a polyisocyanate (col. 2 lines 24-28).

Singh et al. does not disclose the polyol component premixed before the mixing of the polyol component and the polyisocyanate component. However, Althaus et al. teaches mixing the polyol and amine before processing with the isocyanate (col. 4 lines 11-18). At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the processing steps disclosed in Althaus et al. with the composition disclosed in Singh et al. and would have been motivated to do so since it is

a process usually used in polyurethane production and requires fewer reaction sequence steps than prepolymer formation (col. 4 lines 11-28)

Singh et al. also does not disclose a light resistant aromatic amine. However, Althaus et al. teaches the light resistant aromatic amine 4,4'-methylene-bis(3-chloro-2,6-diethylaniline) (col. 2 lines 53-55). At the time of the invention a person having ordinary skill in the art would have found it obvious to substitute the amine disclosed in Althaus et al. for the amine of Singh et al. and would have been motivated to do so since it is very temperature stable, as evidenced by Althaus et al. (col. 2 lines 20-25). Not disclosed is the amount of the amine. However, Althaus et al. teaches 19.5 parts amine per 100 parts polyol (Table 3 Amine No. V). At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the amount of amine of Althaus et al. with the composition of Singh et al. and would have been motivated to do so to achieve the desired pot life.

Singh et al. also does not disclose bringing the mixture into contact with a synthetic resin not cured or not completely cured. However, Sondhe et al. teaches mixing (col. 13 line 31) a composition comprising an aromatic amine (col. 3 line 3), and a polyol component and a polyisocyanate component (abstract). Sondhe et al. also teaches that upon mixing, the urethane system will immediately commence reaction (col. 13 lines 33-35); therefore it is at least partially cured. Also disclosed is application to an epoxy, which is not fully cured (col. 3 lines 59-62). At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the composition of Singh et al. with the process of Sondhe et al. and would have been

motivated to do so for such desirable properties as lower residual free aromatic polyisocyanates, as evidenced by Singh et al. (col. 1 lines 5-10).

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singh et al. (U.S. Pat. 5,077,371) in view of Althaus et al. (U.S. Pat. 4,950,792) in view of Sondhe et al. (U.S. Pat. 5,340,652) and in further view of McGaughey et al. (U.S. Pat. 3,646,651).

Regarding claim 41: Singh et al. teaches a process for production comprising mixing one or more low molecular weight polyols having a molecular weight of less than 250 (col. 2 lines 20-28) and being a polyether polyol with two hydroxyl groups (col. 3 lines 17-29). Therefore, the concentration of hydroxyl groups per kilogram is between 8 (MW=250) and 22 (MW=90, lowest molecular weight of the preferred polyol, butanediol). Also disclosed is a high molecular weight polyol having a molecular weight of 650-3000 with a functionality of 2 (col. 2 lines 50-66). Therefore, the concentration of hydroxyl groups per kilogram is between 0.66 (MW=3000) and 3 (MW=650). Also mixed are an aromatic amine (col. 1 lines 29-33) and a polyisocyanate (col. 2 lines 24-28).

Singh et al. does not disclose the polyol component premixed before the mixing of the polyol component and the polyisocyanate component. However, Althaus et al. teaches mixing the polyol and amine before processing with the isocyanate (col. 4 lines 11-18). At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the processing steps disclosed in Althaus et al. with the

composition disclosed in Singh et al. and would have been motivated to do so since it is a process usually used in polyurethane production and requires fewer reaction sequence steps than prepolymer formation (col. 4 lines 11-28)

Singh et al. also does not disclose a light resistant aromatic amine. However, Althaus et al. teaches the light resistant aromatic amine 4,4'-methylene-bis(3-chloro-2,6-diethylaniline) (col. 2 lines 53-55). At the time of the invention a person having ordinary skill in the art would have found it obvious to substitute the amine disclosed in Althaus et al. for the amine of Singh et al. and would have been motivated to do so since it is very temperature stable, as evidenced by Althaus et al. (col. 2 lines 20-25).

Singh et al. also does not disclose bringing the mixture into contact with a synthetic resin not cured or not completely cured. However, Sondhe et al. teaches mixing (col. 13 line 31) a composition comprising an aromatic amine (col. 3 line 3), and a polyol component and a polyisocyanate component (abstract). Sondhe et al. also teaches that upon mixing, the urethane system will immediately commence reaction (col. 13 lines 33-35); therefore it is at least partially cured. Also disclosed is application to an epoxy, which is not fully cured (col. 3 lines 59-62). At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the composition of Singh et al. with the process of Sondhe et al. and would have been motivated to do so for such desirable properties as lower residual free aromatic polyisocyanates, as evidenced by Singh et al. (col. 1 lines 5-10).

Singh et al. does not disclose that the resin is applied onto the gel coat material. However, McGaughey et al. teaches applying a composite material of a polyurethane

(col. 2 lines 55-63) covered with an epoxy resin (col. 3 lines 1-20 and col. 2 lines 15-40). At the time of the invention a person having ordinary skill in the art would have found it obvious to use the polyurethane of Singh et al. in the product of McGaughey et al. and would have been motivated to do so to achieve composite chemical processing equipment able to withstand corrosive environments as evidenced by McGaughey et al. (col. 1 lines 1-20).

Response to Arguments

Applicant's arguments with respect to claims 23 and 41 have been considered but are moot in view of the new ground of rejection based on prior art newly cited on the IDS of April 28, 2011.

The declaration filed April 28, 2011 is not in English and cannot be used as evidence without an English language translation.

Applicant's arguments filed April 28, 2011 with respect to claims 20-22 and 24-40 have been fully considered but they are not persuasive.

A) Applicant's argument that Singh et al. does not teach adding an amine into the polyol components is not persuasive as this argument does not take into account the teaching of the other applied prior art. Althaus et al. teaches mixing the polyol component with an amine before reacting with an isocyanate. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is not

germane if Singh et al. is concerned with using both the dimer of TDI in addition to TDI since this is the isocyanate components of the reaction. The limitation in the claims and Althaus et al. are concerned with the polyol components of the reaction. Again, the argument that Singh et al. does not use an amine in the polyol component does not take into account the teaching of Althaus et al., which does teach this feature.

B) In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, at the time of the invention a person having ordinary skill in the art would have found it obvious to combine the processing steps disclosed in Althaus et al. with the composition disclosed in Singh et al. and would have been motivated to do so since it is a process commonly used in polyurethane production and requires fewer reaction sequence steps than prepolymer formation (col. 4 lines 11-28). The reason to use 4,4-methylene-bisanimines in combination with low molecular weight polyols, high molecular weight polyols, TDI and TDI dimer is stated in the art and cited in the action above.

C) Applicant's argument that Althaus et al. fails to provide teaching that amines are indispensable for making polyurethanes or necessary for the preparation of

polyurethane prepolymers is not persuasive. As set forth in part B above, Althaus et al. does provide the motivation. Further, while Althaus et al. teaches an embodiment in which prepolymers are prepared, the reference also discloses a one-shot process. Nonpreferred and alternative embodiments constitute prior art (MPEP 2123 II). Further, as set forth in part B above, the motivation to use a one-shot process is it requires fewer reaction sequence steps than prepolymer formation.

D) Applicant's argument that Singh et al. makes clear that the order of addition of the reactants is important is not persuasive as the claimed order is disclosed by the prior art, see Althaus et al.

E) Applicant's argument that Motsinger et al. is not analogous art is not persuasive. As the Office action states, Motsinger et al. is analogous art in the field of polyurethane products. Both references are concerned with the same field of endeavor.

F) Applicant's argument that Motsinger et al. does not teach combining a polyurethane and a fiber reinforced epoxy resin, but teaches making separate and distinct components of the product is not persuasive. Motsinger et al. teaches the inner shell 11 is polyurethane and the outer shell 10 is epoxy. According to Fig. 1, the inner shell 11 is adjacent to the outer shell 10.

G) Applicant's argument that Chapin is not analogous art is not persuasive. As the Office action states, Chapin is analogous art in the field of polyurethane products. Both references are concerned with the same field of endeavor.

Conclusion

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 4/28/2011 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEGAN MCCULLEY whose telephone number is (571)270-3292. The examiner can normally be reached on Monday-Friday 8:30-4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. M./
Examiner, Art Unit 1767

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1767